

### Remarks

Claims 1-17 are pending and stand rejected as anticipated by or obvious from the teachings of Sejnoha or Sejnoha in view of Roberts. Claims 18-20 have been canceled. Also accompanying this response is a Request for Continued Examination.

Claim 1 has been amended to make clear that the claimed invention is directed to unsupervised training of acoustic models (discriminative training) in a “segment-based” speech recognition system. As explained in the background section of the present application, the prior art (such as the cited Sejnoha reference) describes such discriminative training in the more common “frame-based” speech recognition systems, but that: “None of the prior approaches will work with a segment-based speech recognition system.” *Page 3, line 4*. This is because in a segment-based recognition system “different hypotheses are scored against differing sequences of segment features, rather than all of them being scored relative to a common sequence of frame features” as in a frame-based system.

This difference between frame-based systems as in Sejnoha and the present “segment-based” invention is explicitly recited in the claims which require that for “correct segment-based alignment data that represents a correct alignment of a first sequence of utterance features” “a first phoneme” be identified “that corresponds to a second phoneme in” “incorrect segment-based alignment data that represents an alignment of a second sequence of utterance features” and modifying a first acoustic model as further described. In frame-based systems, different hypotheses are all scored relative to a single common sequence of input frame features rather than against different segment-based sequences of utterance features as required by claim 1.

Thus, frame-based systems such as Sejnoha and Roberts do not teach or suggest discriminative training for a segment-based speech recognition system as required by claim 1. Claims 2-11 depend from claim 1 and are allowable for the same reasons. Claim 12 is very like claim 1 in being directed to a segment-based recognition system having two different first and second segment-based alignments of utterance features, and is thus allowable over Sejnoha and Roberts for the same reasons as for claim 1. Claim 13 depends from claim 12 and so is similarly allowable. Claims 14-17 are allowable for the same reasons. Reconsideration and allowance of the claims is respectfully requested.

### **Conclusion**

It is submitted that all the pending claims are now in a condition for allowance. Reconsideration of the application and issuance of a notice of allowance are respectfully requested.

It is believed that a one month extension of time is required for this matter. Applicant hereby petitions for same and requests that any extension or other fee required for timely consideration of this application be charged to Deposit Account No. 19-4972. The Examiner is requested to telephone the undersigned if any matters remain outstanding so that they may be resolved expeditiously.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "JS", is written over a horizontal line.

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